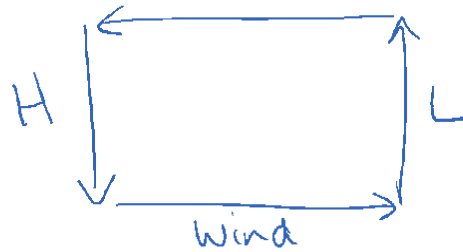


# Wind

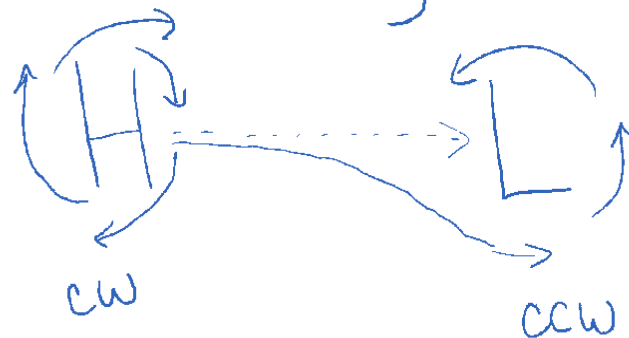
June 11, 2015 8:59 AM

- blows from H pressure to L pressure



- H pressure  $\Rightarrow$  cold, dry air
- L pressure  $\Rightarrow$  warm, moist air
  - $\nwarrow$  lighter than dry due to H in water
- normally wind blows straight from the centre of a high to the centre of a low, BUT the Coriolis Effect causes wind to change direction...
- Coriolis Effect
  - caused by  $\oplus$ 's rotation
  - causes winds to veer to the right in the N hem

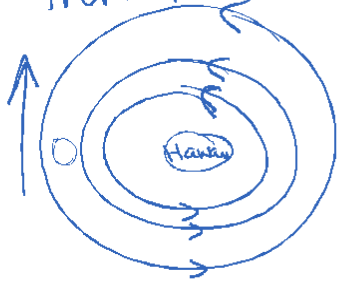
- $\rightarrow$  air moving ccw around a L
- $\rightarrow$  air moving cw around a H



- opposite in S. hem.

## Hurricanes

larger - 100s of miles  
forms over water  
collision of hot air and water  
160mi/hr winds  
eye/centre - calm  
then reverses - why?



## Tornadoes

funnel, damage only  
where touches down  
billion watts (2 nuclear reactors)  
300mi/hr winds  $\rightarrow$  100ft/s  
blade of grass thru fence post  
up to a mile wide  
forms over land



both are low pressure zones

## Air masses

- a large body of air with the same temperature and moisture content throughout.

Types of Air Masses:

P - Polar - from poles, colder

T - Tropical - from closer to equator, warmer

c - continental - drier

m - maritime - moister

or combinations

mP - moist + cold

cT - dry + warm

- Air masses can control the weather for days to months. Most weather changes occur along the edges of air masses at boundaries

called fronts.

## Fronts

- the boundaries between air masses
- named for the type of air mass they are leading
- weather map symbols



cold front moving down page



warm front moving down page

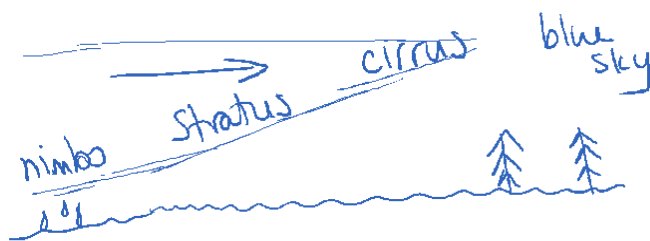


stationary front, not moving



occluded front, cold front runs over the warm front

### Warm Front



- gentle slope
- gradual air rise
- layered clouds (stratus)
- precipitation
- moves slower

### Cold Front



- pushes air up as cold air goes under
- steep
- abrupt air rise
- showery, thunderstorms
- moves faster